RICOH®

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identification

Product Name: Ricoh FT Developer Type 310 - Black
Product Number: 889268
Chemical Name: Mixture
CAS Number: 0-00-0

Company Identification

Ricoh Corporation
5 Dedrick Place
West Caldwell, NJ 07006
(973) 882-2000, (800) 336-6737 (For product information)
(800) 336-6737 (For emergencies)

GENERAL USE:
FT5733, FT5433, FT3313/3113/3413, FT4427, FT4727, FT3013, FT3213, FT3513, FT3713.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Amount	CAS Number
POLYESTER RESIN (CAS# CONFIDENTIAL)	< 3.0 %	0-00-0
STYRENE ACRYLIC POLYMER	< 3.0 %	25036-19-5
*POLYOLEFINE	< 3.0 %	9003-07-0
**CARBON BLACK	< 3.0 %	1333-86-4
FERRITE POWDER	< 97.0 %	1309-37-1
FERRITE POWDER	< 97.0 %	1314-13-2
FERRITE POWDER	< 97.0 %	1317-38-0

MISCELLANEOUS:
RTECS Number: N/App.

*Polyolefine is listed on the IARC Monograph. The IARC has evaluated the carcinogenicity of Polyolefine as inadequate to determine a carcinogenic risk for humans. **Carbon Black was reclassified by the IARC as a Group 2B substance.

(section 2 continued)

This product contains no known hazardous materials as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

EXPOSURE GUIDELINES:

****Carbon Black**

OSHA PEL: 3.5 mg/m^3
ACGIH TWA: 3.5 mg/m^3

3. HAZARDS IDENTIFICATION

******************* EMERGENCY OVERVIEW *******************
*****
*** THIS PRODUCT IS NON-HAZARDOUS. ***
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PRIMARY ENTRY ROUTES:
Eyes, inhalation, ingestion.

ACUTE EYE EFFECTS:
May cause slight conjunctival irritation.

ACUTE SKIN EFFECTS:
No skin irritation.

ACUTE INHALATION EFFECTS:
Gasping.

ACUTE INGESTION EFFECTS:
Oral rat LD50: greater than 5g/kg bodyweight.

CARCINOGENICITY:
In 1996 the IARC reevaluated carbon black as a Group 2B carcinogen (possible human carcinogen) based on the result of inhalation studies on rats. This was determined on the development of lung tumors in rats receiving chronic (large amounts over a long period of time) inhalation exposures of free carbon black at levels that induce particle overload of the lungs. There were no observed incidence of tumors in either dermal or oral studies. A two year bioassay using typical toner preparations containing carbon black showed no association between toner exposure (inhalation or otherwise) and tumor development in rats. Studies performed in animal models other than rats have not demostrated an association between carbon black and lung tumors.

(section 3 continued)

MEDICAL CONDITION AGGRAVATED BY LONG-TERM EXPOSURE:
Not applicable.

CHRONIC EFFECTS:
Prolonged inhalation of excessive amounts of any dust may cause lung damage that is attributed to 'lung overloading', a generic response to excessive amounts of any dust retained in the lungs for a prolonged interval. Use of this product as intended does not result in inhalation of excessive dust.

MISCELLANEOUS:
NTP? No IARC Monographs? Yes OSHA Regulated? No.

Signs and Symptoms of Exposure: Not applicable.

4. FIRST AID MEASURES

EYE CONTACT FIRST AID:
Try to remove with eye drops or flush with water. If unsuccessful, get medical attention.

SKIN CONTACT FIRST AID:
Wash thoroughly with soap and water.

INHALATION FIRST AID:
Remove from exposure.

INGESTION FIRST AID:
Dilute stomach contents with several glasses of water.

MISCELLANEOUS:
Ames test result: negative.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES
COC Flash Point: N/A
Autoignition Temperature: N/A

FLAMMABLE LIMITS IN AIR
LEL: N/A
UEL: N/A

(section 5 continued)

FLAMMABILITY CLASSIFICATION:
Not applicable.

EXTINGUISHING MEDIA:
Carbon dioxide, dry chemicals, foam or water spray(fog) may be suitable.

UNUSUAL FIRE OR EXPLOSION HAZARDS:
Airborne dispersal of most finely divided organic powders such as developer may form an explosive mixture. Do not incinerate loose or spilled developer.

FIRE FIGHTING INSTRUCTIONS:
Special Fire-Fighting Procedures: Airborne dispersal of most finely divided organic powders such as developer may form an explosive mixture. Do not incinerate loose or spilled developer.

6. ACCIDENTAL RELEASE MEASURES

SPILL / LEAK PROCEDURES:
If spilled, sweep up using an approved toner vacuum cleaner with a .5 micron filter or smaller such as the Atrix AAA Toner Vacuum (Ricoh EDP Code: 342MIU). Use of a vacuum cleaner not rated for toner particulate could be a potential fire hazard and/or result in personal injury. Remove residue with soap and water.

7. HANDLING AND STORAGE

STORAGE REQUIREMENTS:
Keep out of reach of children.

MISCELLANEOUS:
Cleanse skin thoroughly after contact, before breaks and meals, and at the end of work periods.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

VENTILATION:
Local Exhaust Ventilation: None required under normal conditions of use.

Special Ventilation Requirements: None required under normal conditions of use.

(section 8 continued)

Mechanical (general): None required under normal conditions of use.

Other: None.

RESPIRATORY PROTECTION:
None required under normal conditions of use.

PROTECTIVE CLOTHING / EQUIPMENT:
Protective Gloves: None required under normal conditions of use.

Eye Protection: None required under normal conditions of use.

Other Protective Clothing or Equipment: None.

MISCELLANEOUS:
Work and Hygenic Practices: Cleanse skin thoroughly after contact, before breaks and meals, and at the end of work periods.

9. PHYSICAL AND CHEMICAL PROPERTIES

FORM	Powder
COLOR	Black
ODOR	slight plastic odor
BOILING POINT	Not applicable C
VAPOR PRESSURE	Not applicable psia
VAPOR DENSITY	Not applicable (Air = 1)
SOLUBILITY IN WATER	Negligible: less than 0.1%
SPECIFIC GRAVITY	2.7 (Water = 1)
MELTING/FREEZING POINT	80C or higher C
% VOLATILES	Not applicable %
EVAPORATION RATE (N-BUAC=1)	Not applicable

10. STABILITY AND REACTIVITY

STABILITY:
Stable.

POLYMERIZATION:
Will not Occur.

CHEMICAL INCOMPATIBILITIES:
Not applicable.

(section 10 continued)

CONDITIONS TO AVOID:
Not applicable.

HAZARDOUS DECOMPOSITION PRODUCTS:
Carbon monoxide and other decomposition products in the case of incomplete combustion.

11. TOXICOLOGICAL INFORMATION

No information available.

12. ECOLOGICAL INFORMATION

No information available.

13. DISPOSAL CONSIDERATIONS

DISPOSAL:
Used developer should be disposed of in an environmentally safe manner and in accordance with governmental regulations. Do not incinerate loose or spilled developer. Disposal regulations vary from locality to locality, therefore, consult your local office of the EPA to determine proper method of disposal.

14. TRANSPORT INFORMATION

PRODUCT LABEL...: Ricoh FT Developer Type 310 - Black

15. REGULATORY INFORMATION

Canadian Disclosure List

**Carbon Black	(1333-86-4)
Ferrite Powder	(1309-37-1)
Ferrite Powder	(1314-13-2)

16. OTHER INFORMATION

Prepared By.....:	Corporate Quality Assurance/Environmental Administration
Approved By.....:	David Huelbig
Title.....:	Safety Engineer
Approval Date.....:	October 29, 1997
Supercedes Date...:	New
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END OF MSDS

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